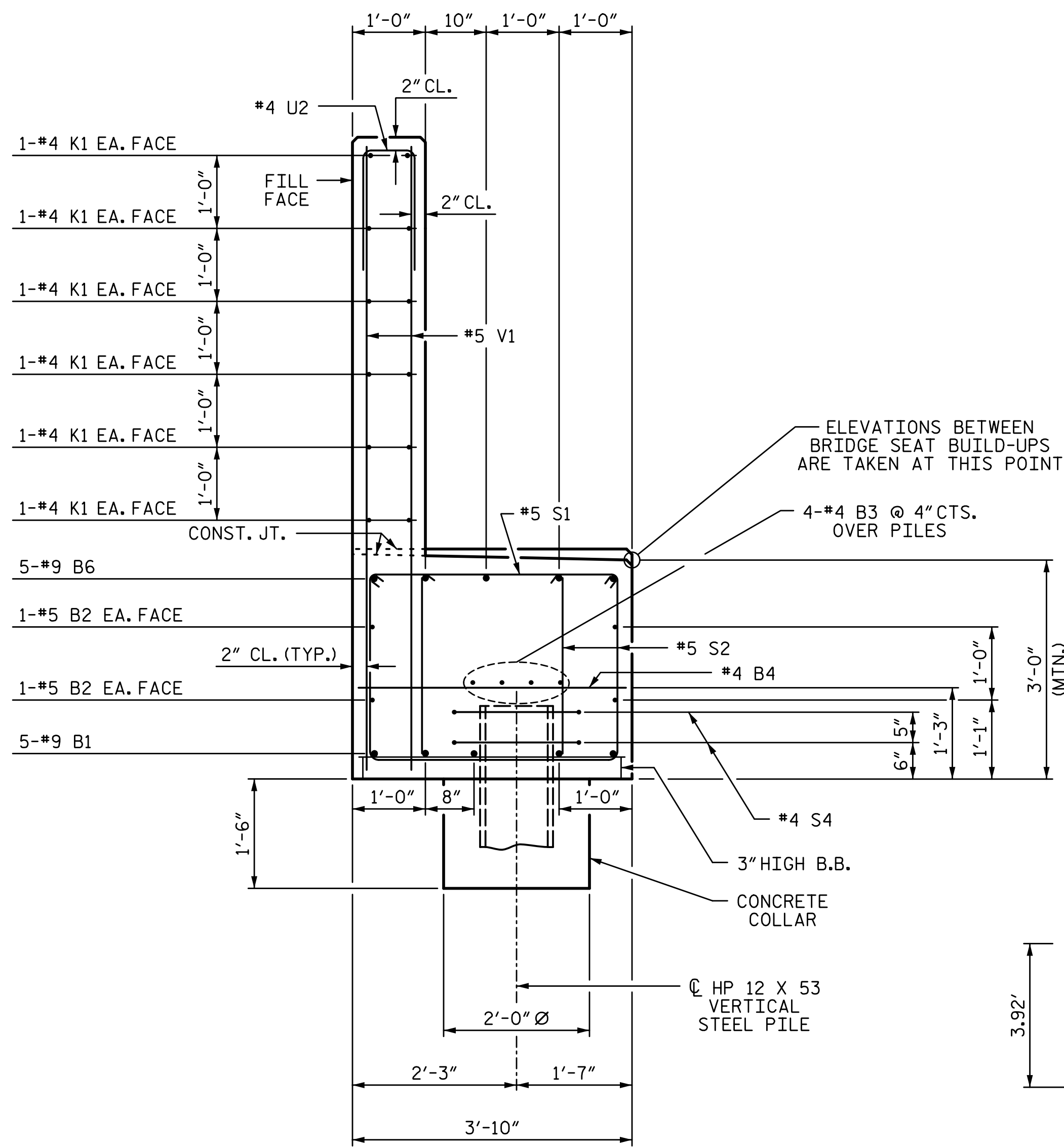
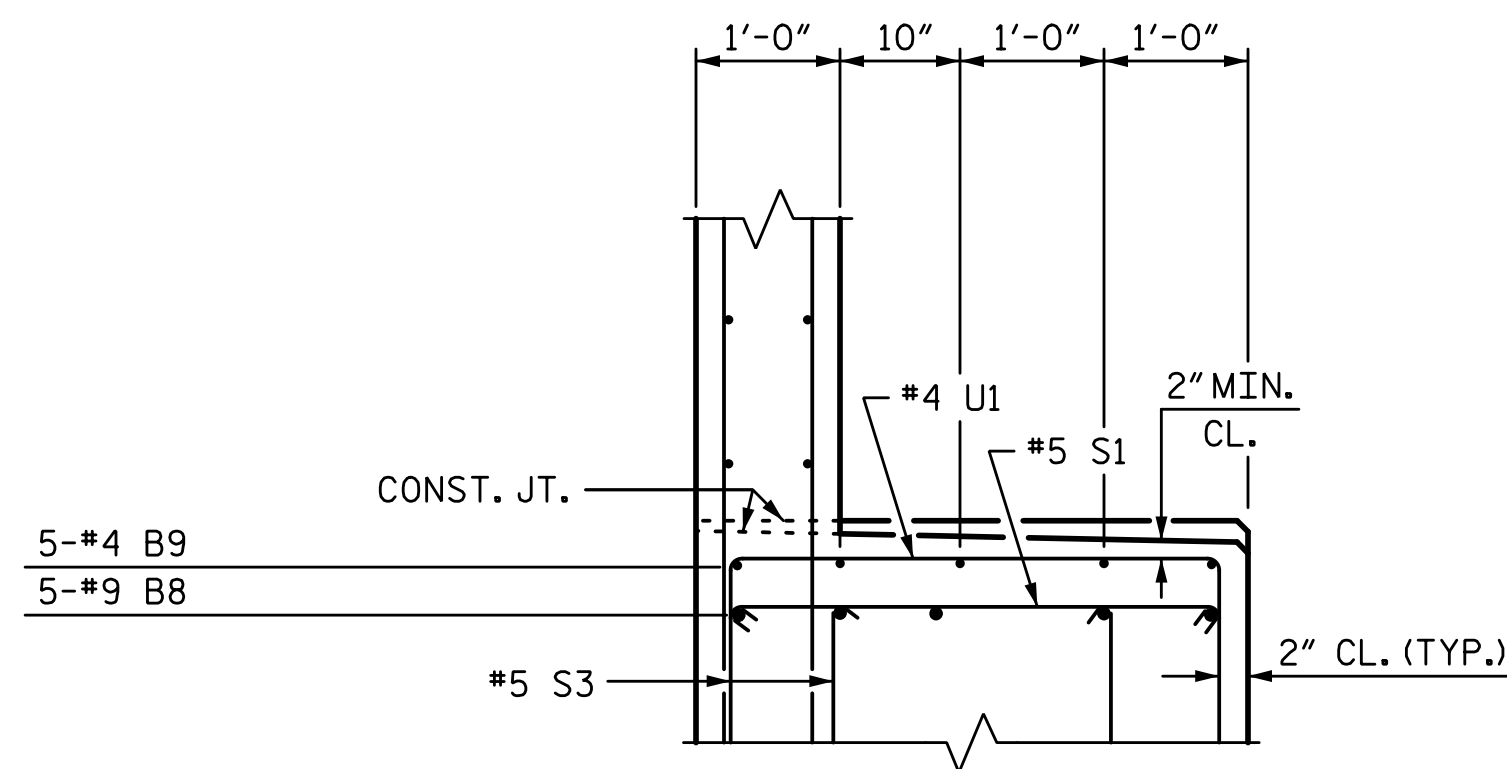


3/22/2017 8:30:08 AM G:\Projects\2014\U-3109A\Structures\Site 2\Site 2-Str 2 Bridge 436 (SBL)\Drawings\Final\402\_U3109A\_smu\_eb1.dgn

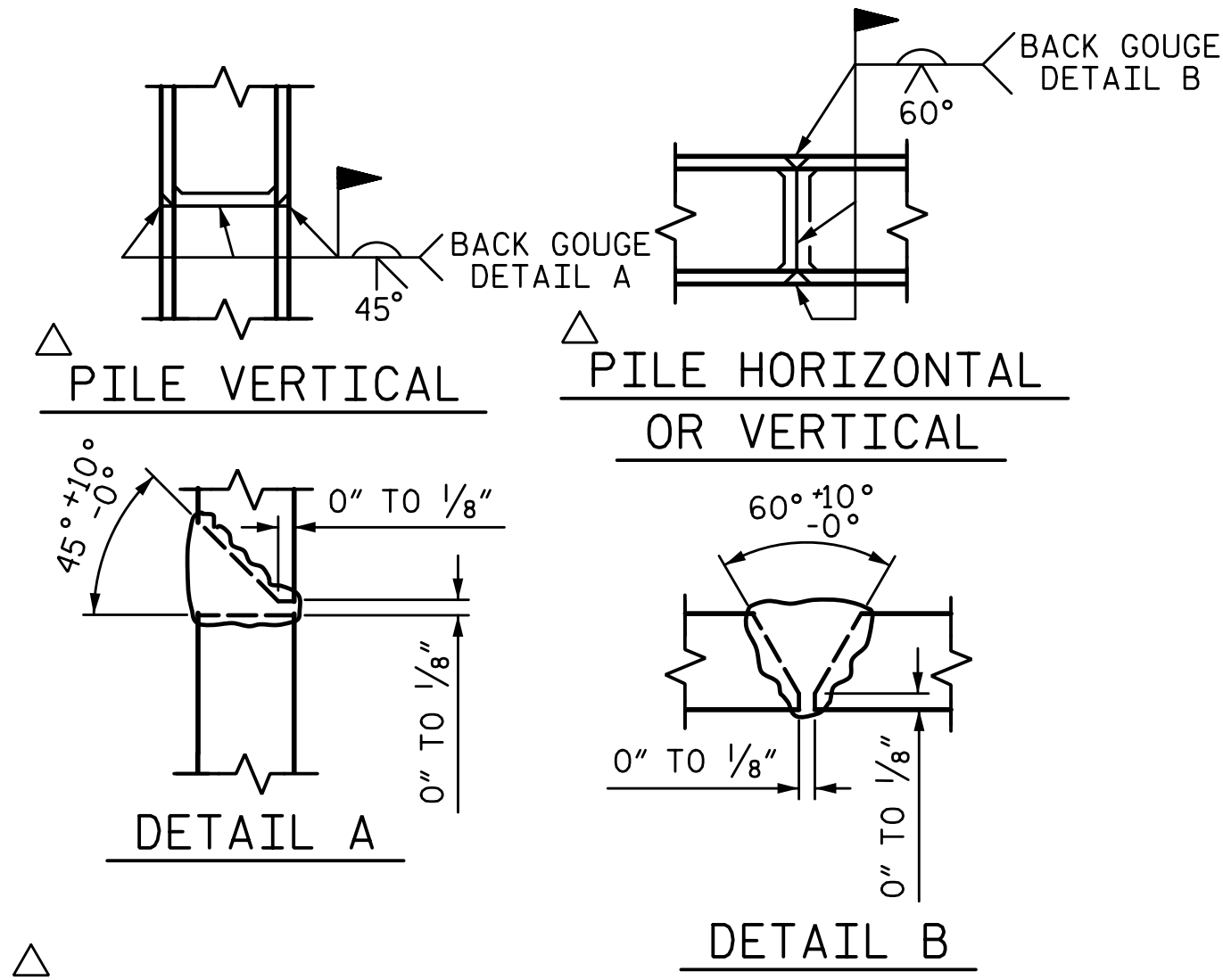


**SECTION A-A**

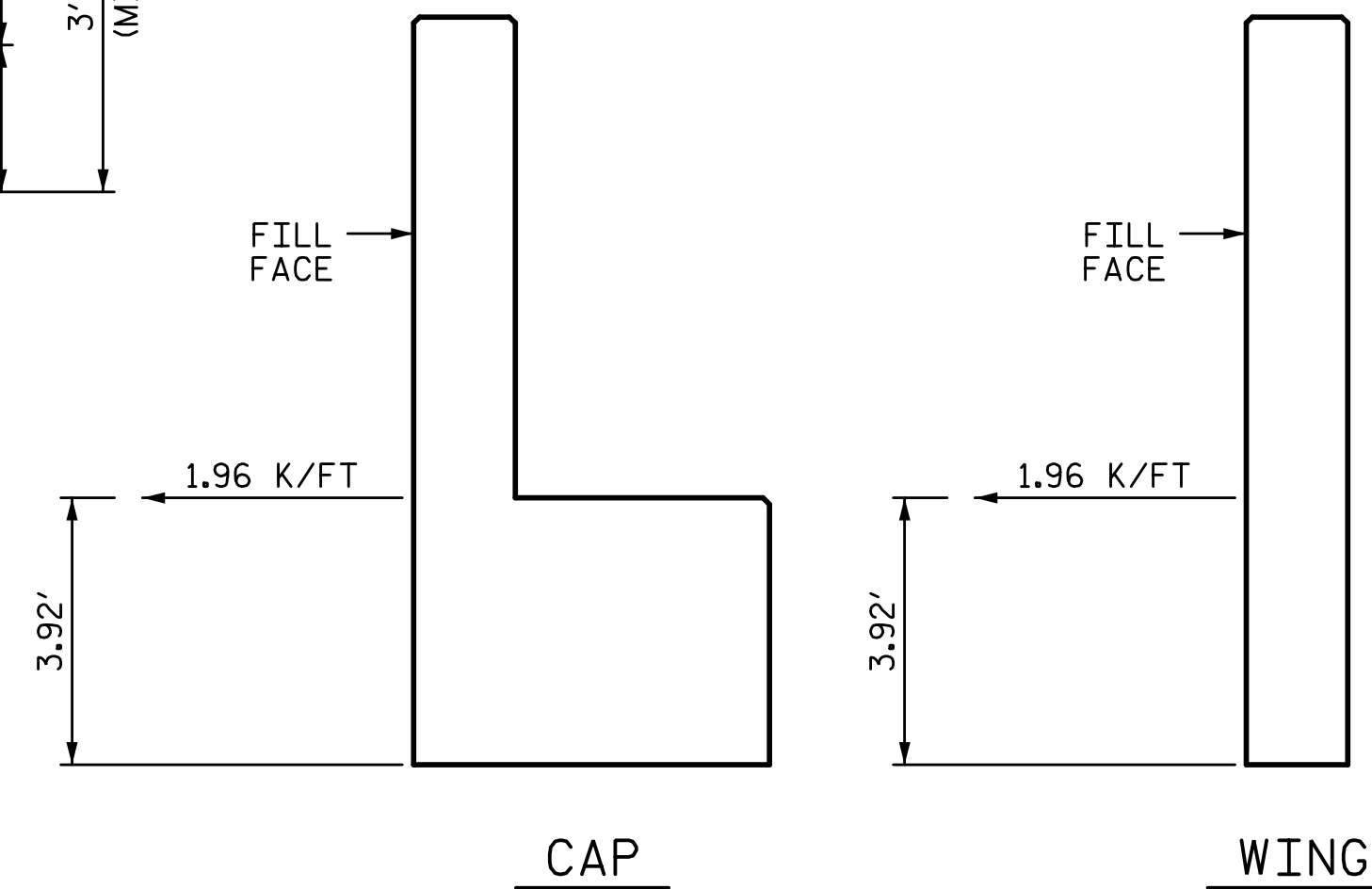
(TIEBACK NOT SHOWN FOR CLARITY)



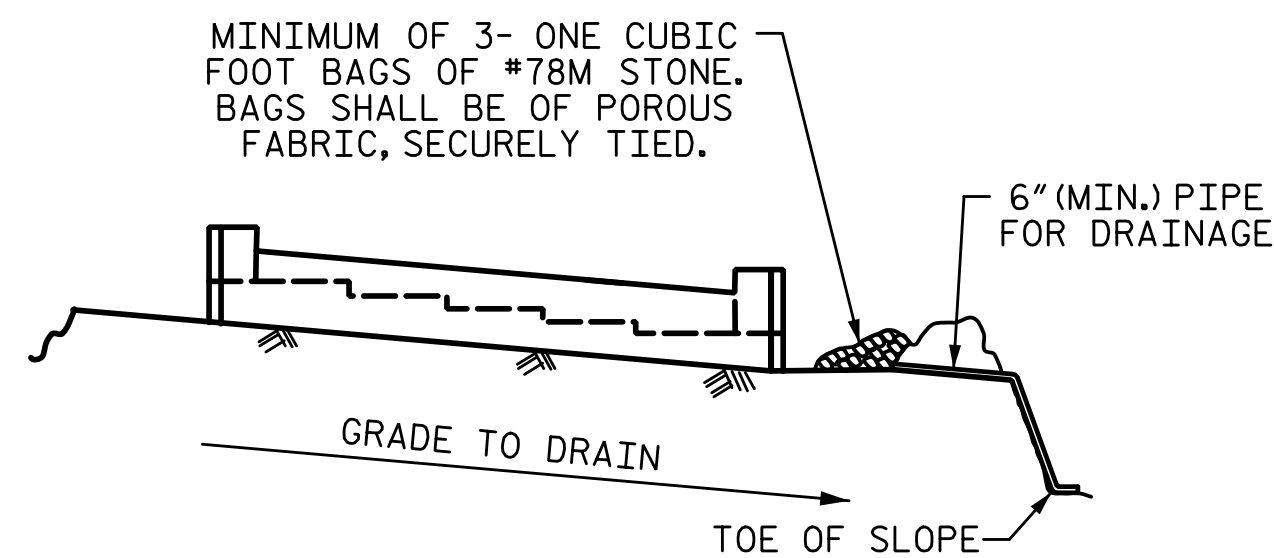
**SECTION B-B**



**PILE SPLICE DETAILS**



**TIEBACK DETAILS**



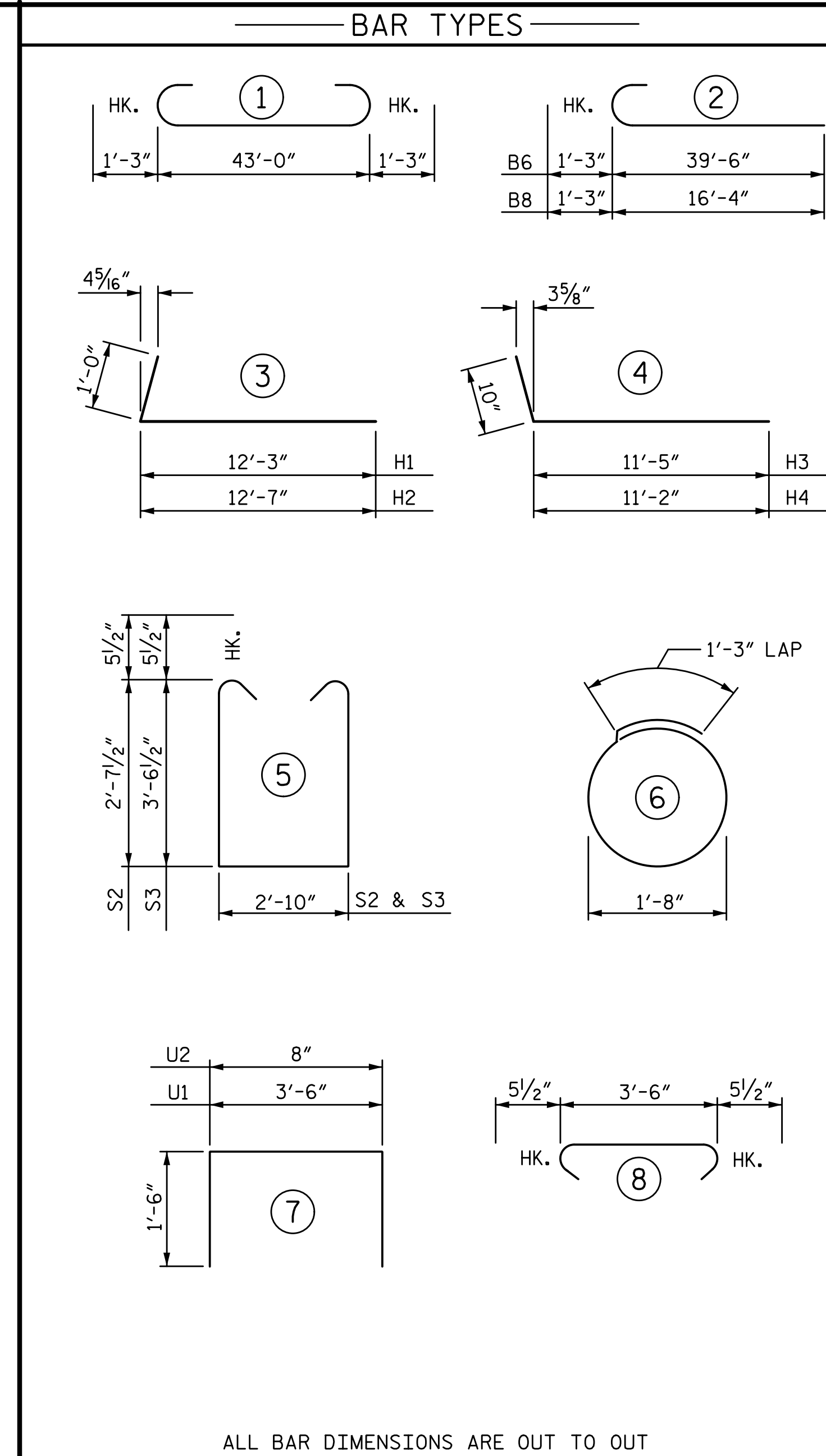
MINIMUM OF 3- ONE CUBIC FOOT BAGS OF #78M STONE. BAGS SHALL BE OF POROUS FABRIC, SECURELY TIED.

BAGGED STONE AND PIPE SHALL BE PLACED IMMEDIATELY AFTER COMPLETION OF END BENT EXCAVATION. PIPE MAY BE EITHER CONCRETE, CORRUGATED STEEL, CORRUGATED ALUMINUM ALLOY, OR CORRUGATED PLASTIC. PERFORATED PIPE WILL NOT BE ALLOWED.

BAGGED STONE SHALL REMAIN IN PLACE UNTIL THE ENGINEER DIRECTS THAT IT BE REMOVED. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF SILT ACCUMULATIONS AT BAGGED STONE WHEN SO DIRECTED BY THE ENGINEER. BAGS SHALL BE REMOVED AND REPLACED WHENEVER THE ENGINEER DETERMINES THAT THEY HAVE DETERIORATED AND LOST THEIR EFFECTIVENESS.

NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK AND THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.

**TEMPORARY DRAINAGE AT END BENT**



ALL BAR DIMENSIONS ARE OUT TO OUT

**BILL OF MATERIAL**

**END BENT 1**

| BAR NO. | SIZE | TYPE | LENGTH | WEIGHT  |     |
|---------|------|------|--------|---------|-----|
| B1      | 5    | 9    | 1      | 45'-6"  | 774 |
| B2      | 4    | 5    | STR    | 43'-2"  | 180 |
| B3      | 8    | 4    | STR    | 22'-10" | 122 |
| B4      | 14   | 4    | STR    | 3'-6"   | 33  |
| B5      | 2    | 5    | STR    | 6'-8"   | 14  |
| B6      | 5    | 9    | 2      | 40'-9"  | 693 |
| B7      | 5    | 4    | STR    | 9'-3"   | 31  |
| B8      | 5    | 9    | 2      | 17'-7"  | 299 |
| B9      | 5    | 4    | STR    | 6'-8"   | 22  |
| H1      | 26   | 6    | 3      | 13'-3"  | 517 |
| H2      | 26   | 6    | 3      | 13'-7"  | 530 |
| H3      | 21   | 5    | 4      | 12'-3"  | 268 |
| H4      | 21   | 5    | 4      | 12'-0"  | 263 |
| K1      | 24   | 4    | STR    | 22'-10" | 366 |
| K2      | 8    | 4    | STR    | 2'-10"  | 15  |
| S1      | 62   | 5    | 8      | 4'-5"   | 286 |
| S2      | 74   | 5    | 5      | 9'-0"   | 695 |
| S3      | 50   | 5    | 5      | 10'-10" | 565 |
| S4      | 14   | 4    | 6      | 6'-6"   | 61  |
| U1      | 12   | 4    | 7      | 6'-6"   | 52  |
| U2      | 37   | 4    | 7      | 3'-8"   | 91  |
| V1      | 74   | 5    | STR    | 8'-4"   | 643 |
| V2      | 34   | 5    | STR    | 11'-9"  | 417 |
| V3      | 32   | 5    | STR    | 10'-2"  | 339 |

TOTAL REINFORCING STEEL 7276 LB

CLASS "A" CONCRETE BREAKDOWN  
POUR 1  
(CAP, COLLARS, & LOWER WINGS) 26.5 CY

POUR 2  
(BACKWALL AND UPPER WINGS) 16.5 CY

TOTAL CLASS "A" CONCRETE 43.0 CY

HP 12 X 53 STEEL PILES  
NO. 7 560 LF

PILE DRIVING EQUIPMENT SETUP  
FOR HP 12 X 53 STEEL PILES 7 EA

PROJECT NO. U-3109A  
ALAMANCE COUNTY  
STATION: 146+61.35 -L-

SHEET 3 OF 3

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
SUBSTRUCTURE

**END BENT 1**

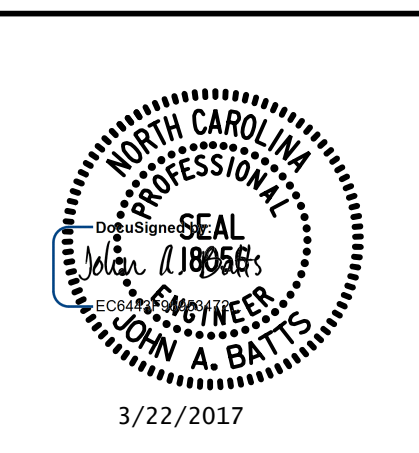
(SBL)

| REVISIONS |     |       |     | SHEET NO. |       |
|-----------|-----|-------|-----|-----------|-------|
| NO.       | BY: | DATE: | NO. | BY:       | DATE: |
| 1         |     |       | 3   |           |       |
| 2         |     |       | 4   |           |       |

TOTAL SHEETS S02-51

PLANS PREPARED BY:

**SIMPSON & ASSOCIATES**  
5640 Dillard Drive  
Suite 200  
Cary, NC 27518  
(919) 852-0468  
(919) 852-0598 (Fax)  
www.simpsonengr.com  
LICENSURE NO. C-2521



DRAWN BY: S.D. COOPER DATE: 9-15  
CHECKED BY: J.A. BATTS DATE: 9-15  
DESIGN ENGINEER OF RECORD: J.A. BATTS DATE: 9-15

STR. #2